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EXAMINER

LEURIG, SHARLENE L

ART UNIT PAPER NUMBER

2879

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/888,954

Applicant(s)

GEORGE ET AL.

Examiner

Sharlene Leurig

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 1-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-43, 45 and 46 is/are rejected.
- 7) ☒ Claim(s) 44 and 47-50 is/are objected to.
- 8) ☒ Claim(s) 1-50 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment filed on March 4, 2003 has been entered and acknowledged by the Examiner.

### ***Election/Restrictions***

1. Applicant's election with traverse of Group III, claims 40-50 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that the method, apparatus, and product claims are not independent and distinct inventions. This is not found persuasive because the applicant has attempted to amend around the restriction requirement by inserting the phrase "continuous coil" into the claims. In the case of the product claims, Group III, the phrase "continuous coil" has no patentable weight since it describes an intermediate product and not the final product, which is an EL lamp that has been cut into a specified shape. Therefore the product claims are distinct from the process and apparatus claims, which are directed to coating continuous coils.

The process claims, Group I, and apparatus claims, Group II, are distinct from each other because the process claims are directed to continuously laminating the separate continuous coils of the front substrate and rear substrate, but do not include the limitation of continuously laminating the separate coils to form one coil. The apparatus includes the limitation of laminating the front and rear substrate coils to produce a single continuous coil. Therefore the process and apparatus claims do not have all the same limitations, the process can be practiced using a materially different

apparatus that does not coil the lamination joining the front and rear substrate, and Groups I and II are restrictable from each other.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 47 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language recites dual scribe lines, "wherein the first of said dual scribe lines is outward of the dual scribe lines". One of the pair of scribe lines cannot be outward of the pair. For the purposes of examination, the claim will be interpreted as meaning that the first of the dual scribe lines is closer to the periphery of the EL lamp than the second of the dual scribe lines.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appelberg (5,045,755) (of record) in view of Hora (6,107,735). Appelberg discloses

an electroluminescent lamp material comprising a front electrode laminate comprising an indium tin oxide layer (column 4, line 62) coated on a continuous coil polyester film, where Mylar is the polyester (column 4, line 54), an organic binder layer (epoxy adhesive) coated on the ITO layer (column 5, lines 23-25), and a mono-layer of phosphor particles deposited on the organic binder layer (column 6, lines 48-49). The rear electrode laminate disclosed by Appelberg is a continuous coil of an aluminum foil polyester film (column 8, line 67). Though the aluminum foil disclosed by Appelberg is vapor deposited on the front electrode laminate and is not a continuous coil on its own before it is laminated to the front electrode, it can be interpreted as being a continuous coil because once it is laminated (deposited) onto the front electrode laminate it is part of the continuous coil of the laminated layers. The way the aluminum foil is laminated is considered product-by-process, which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Appelberg lacks a layer of barium titanate between the aluminum foil and the organic binder layer.

It is well known in the art, as indicated in Appelberg's own discussion of the prior art (column 2, line 25) to include a reflective layer of barium titanate between the phosphor layer and the rear electrode.

Mora teaches the inclusion of a barium titanate layer between the phosphor layer and the reverse electrode (column 5, line 25).

Therefore regarding claim 40, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Appelberg's EL lamp with a layer of barium titanate between the phosphor monolayer on the organic binder layer and the aluminum foil, as it has been shown to be well known in the art to provide such a layer for improving the function of the EL lamp.

Regarding claim 41, Appelberg discloses an organic binder (epoxy adhesive) layer that is UV-curable (column 5, lines 34-38) and a phosphor particle layer that is set to a predetermined thickness (column 6, lines 46-48) prior to laminating the front and rear electrode laminates (column 6-8). The Examiner notes that the claim limitation of the phosphor layer being formed prior to the lamination of the front and rear electrodes is drawn to a process of manufacturing, which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

6. Claims 42, 43, 45, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appelberg (5,045,755) (of record) in view of Hora (6,107,735), as applied to claims 40 and 41 above, and further in view of Kobayashi et al. (5,229,628). Appelberg discloses an EL lamp material with all limitations discussed above, but lacks a barium

titanate layer. Hora teaches a barium titanate layer formed between the phosphor layer and the rear electrode.

Regarding claim 42, Appelberg discloses an EL lamp material that is cut to a desired arbitrary size and shape (column 10, lines 61-63) and further discloses a rear electrode that is cut to a predetermined depth through the aluminum foil polyester film to produce a split-electrode EL lamp having at least two electrically isolated rear electrode areas (column 11, lines 38-40).

Appelberg lacks disclosure of a barium titanate layer being partially grooved to produce a split-electrode EL lamp because he lacks disclosure of a barium titanate layer.

Regarding claim 42, Kobayashi teaches a rear electrode cut a predetermined depth through both the aluminum foil and barium titanate layer (column 13, lines 12-16 and line 25) to produce a split-electrode EL lamp having at least two electrically isolated rear electrode areas (Figure 1, elements 4, 5) with uniform light distribution (column 13, lines 50-52).

Regarding claim 43, Kobayashi teaches the rear electrode being cut in the above-described manner to produce a split-electrode EL lamp having at least two electrically isolated rear electrodes of equal area to emit light of equal brightness (column 13, lines 50-52).

Regarding claim 45, Kobayashi teaches multiple cuts through the rear electrode (Figure 1, elements 4, 5) to produce a split-electrode EL lamp having multiple pairs of electrically isolated rear electrode areas wherein light is emitted in the area of each pair

of multiple pairs (since all the electrode areas formed by the cuts can be grouped into pairs) to produce special effects lighting, where the uniform lighting effect is interpreted as being a special effect (column 13, lines 50-52).

Regarding claim 46, Kobayashi teaches every electrically isolated rear electrode area in conjunction with an electrical connector in contact with the aluminum foil (Figure 1, element 5) for powering the EL lamp.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Appelberg's EL lamp with a layer of barium titanate between the phosphor monolayer on the organic binder layer and the aluminum foil, as taught by both Hora and Kobayashi, and to further modify the lamp with the rear electrode being cut to a predetermined depth through both the aluminum foil layer and the barium titanate layer, as taught by Kobayashi, to produce electrically isolated electrode areas in order to provide a lamp with more even light distribution.

#### ***Allowable Subject Matter***

7. Claims 44 and 47-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 44 is found to be allowable because no prior art shows or suggests an EL lamp with the claimed configuration of layers having cuts of predetermined depth made



in the aluminum foil and the barium titanate in order to produce at least two unequal areas to emit light of unequal brightness.

8. Claim 47 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claim 47 is found to be allowable because no prior art shows or suggests an EL lamp with the claimed configuration of layers having dual scribe lines along a periphery of the lamp, with one scribe line cutting through only the aluminum foil and partially into the barium titanate, and the other scribe line cutting through the aluminum foil, the barium titanate, the phosphor layer, the organic binder layer and terminating at the indium tin oxide layer.

Claims 48-50 would be allowable as they are dependent on an allowable claim (47), but are objected to for being dependent on rejected base claims (40 and 47).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharlene Leurig whose telephone number is (703)305-4745. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Sharlene Leurig  
April 21, 2003  
*SL*

  
**VIP PATEL**  
**PRIMARY EXAMINER**